

5. (Once Amended) A process as claimed in claim 1, wherein  $X^1$  and  $X^2$  represent a substituted or non-substituted bicyclic group with at least 5 ring atoms, of which one is a phosphorus atom.

8. (Once Amended) A process as claimed in claim 1, wherein component (C) of catalyst system contains a protonic acid with a pKa value  $> 1$  in aqueous solution at  $25^\circ\text{C}$  or a salt thereof.

9. (Once Amended) A process as claimed in claim 1, where 1,3-butadiene is converted into methyl pentenoate and/or dimethyl adipate.


10. (Once Amended) A process to prepare caprolactam, Nylon 6, or Nylon 6,6 wherein a compound as prepared according to the process of claim 1, is used as an intermediate.

13. (Once Amended) Use of the catalyst system as claimed in claim 11, as a carbonylation catalyst.

Respectfully submitted,

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